**Name of Work:- Improvements to roads and drains in Jakkur Layout and Surrounding areas in ward no.07, Byatarayanapura**

**Estimated Cost:- 100.00 Lakhs**

| S.N | DESCRIPTION OF WORK | Unit | N | L | B | D | QTY | RATE | AMOUNT |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | KSRRB 300-1. Earthwork excavation by manual means in rodinary soil involving an average horizontal throw upto 2 m and an average lift upto 1.5m, excavated surafce levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking clods complete as per specifications.(Pg No.143.Item No.19.1) | | | | | | | | |
| | **RCC DRAIN** | | | | | | | | |
| | 9th A cross | | 2 | 105.00 | 0.90 | 0.90 | 170.10 | | |
| | 10th A cross | | 2 | 115.00 | 0.90 | 0.90 | 186.30 | | |
| | cross roads | | 2 | 310.00 | 0.90 | 0.90 | 502.20 | | |
| | **CC Road** | | | | | | | | |
| | AG Astwathappa Compund area | | 1 | 80.00 | 5.20 | 0.30 | 124.80 | | |
| | | | 1 | 40.00 | 5.35 | 0.30 | 64.20 | | |
| | Over burden earth | | 1 | 96.00 | 2.00 | 0.60 | 115.20 | | |
| | | | | | **TOTAL** | | **1162.80** | 137.80 | 160234.00 |
| | Basic Rate: | cum | **130.00** | | | | | | |
| | Area Weightage @ 6% | | 7.80 | | | | | | |
| | Total | | **137.80** | | | | | | |
| 2 | Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305 Page No. 147 / Item No. 19.60, PWD SR 2016-17 | | | | | | | | |
| | **CC Road** | | | | | | | | |
| | AG Astwathappa Compund area | | 1 | 80.00 | 5.20 | 0.30 | 124.80 | | |
| | | | 1 | 40.00 | 5.35 | 0.30 | 64.20 | | |
| | | | | | **TOTAL** | | **189.00** | 344.50 | 65111.00 |
| | Basic Rate: | cum | **325.00** | | | | | | |
| | Area Weightage @ 6% | | 19.50 | | | | | | |
| | Total | | **344.50** | | | | | | |
| 3 | KSRB 4-1.3: Providing and laying in position plain cement concrete of nominal mix 1:4:8 with OPC @ 220 Kgs with 40mm and down size graded granite metal machine mixed, machine mixed, conrete laid in layers not exceeding 15 cms. Thick well compacted in foundation and plinth, including cost of all materials labour, HOM of machinery, curing complete as per specification . **(Pg.No.13, It.4.3)** | | | | | | | | |
| | **RCC DRAIN-BOTTOM** | | | | | | | | |
| | | | 2.00 | 105.00 | 0.75 | 0.15 | 23.63 | | |
| | | | 2.00 | 115.00 | 0.75 | 0.15 | 25.88 | | |



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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 2.00 | 310.00 | 0.75 | 0.15 | 69.75 | | |
| | **For ramps- (Length for shoulder drains deducted)** | | 2.00 | 100.00 | 0.20 | 0.15 | 6.00 | | |
| | | | 2.00 | 90.00 | 0.20 | 0.15 | 5.40 | | |
| | | | 2.00 | 220.00 | 0.20 | 0.15 | 13.20 | | |
| | **CC Road** | | | | | | | | |
| | AG Astwathappa Compund area | | 1.00 | 80.00 | 5.20 | 0.15 | 62.40 | | |
| | | | 1.00 | 40.00 | 5.35 | 0.15 | 32.10 | | |
| | | | | | **TOTAL** | | **238.35** | 5408.12 | 1289026.00 |
| | Basic Rate: | cum | 5102.00 | | | | | | |
| | Area Weightage @ 6% | | 306.12 | | | | | | |
| | Total | | 5408.12 | | | | | | |
| 4 | KSRB 4.2.2: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 Kgs with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastizers @ 3lts confirming to IS 9103-1999 RE affirmed - 2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, stair case lintels, retaining walls return walls, walls( anythickness) including attached plasters columns piers abutments pillars posts struts butresses string or lacing courses parapets copings, bed blocks , plain windows cills fillets etc., including cost of all materials labour HOM of machinery curing complete as per specifications. Seocifications No. KBS 4.1,4.6 ( Page NO. 14, Item NO. 4.11) | | | | | | | | |
| | **Bottom** | | | | | | | | |
| | 9th A cross | | 2.00 | 105.00 | 0.75 | 0.15 | 23.63 | | |
| | 10th A cross | | 2.00 | 115.00 | 0.75 | 0.15 | 25.88 | | |
| | cross roads | | 2.00 | 310.00 | 0.75 | 0.15 | 69.75 | | |
| | **Side Wall** | | | | | | | | |
| | 9th A cross | **2x2** | 4.00 | 105.00 | 0.15 | 0.60 | 37.80 | | |
| | 10th A cross | **2x2** | 4.00 | 115.00 | 0.15 | 0.60 | 41.40 | | |
| | cross roads | **2x2** | 4.00 | 310.00 | 0.15 | 0.60 | 111.60 | | |
| | | | | | | | **310.05** | 5998.54 | 1859848.00 |
| | Basic Rate: | cum | 5659.00 | | | | | | |
| | Area Weightage @ 6% | | 339.54 | | | | | | |
| | Total | | 5998.54 | | | | | | |
| 5 | KSRB 4.9.2: Providing **TMT Steel Reinforcement for R.C.C work** including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.(Page No.18, Item No.4.46) | | | | | | | | |
| | **Reinforcement for side wall** | | | | | | | | |
| | | | | | | | 310.05 | | |
| | Basic Rate: | Tonne | At 60 Kg % per cum 70966.00 | | | | **18.60** | 75223.96 | 1399392.00 |



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|---|---|---|---|---|---|---|---|---|
| Area Weightage @ 6% | | 4257.96 | | | | | | |
| Total | | 75223.96 | | | | | | |
| Providing and removing Centering, shuttering, strutting, propping etc., for columns, pillars, piers, abutments, post and struts, square / **rectangular slabs /side walls** polygon in plan including cost of materials, labour complete as per specification and directions of the Engineer in charge.(Page No.16, Item NO.4.32) | | | | | | | | |
| **SIDE WALL** | | | | | | | | |
| 9th A cross | 2x4 | 8 | 105.00 | | 0.60 | 504.00 | | |
| 10th A cross | 2x4 | 8 | 115.00 | | 0.60 | 552.00 | | |
| cross roads | 2x4 | 8 | 310.00 | | 0.60 | 1488.00 | | |
| **CC Road** | | | | | | | | |
| | | 2 | 80 | | 0.30 | 48.00 | | |
| | | 2 | 40 | | 0.30 | 24.00 | | |
| | | | | | | **2616.00** | 483.36 | 1264470.00 |
| Basic Rate: | Sqm | 456.00 | | | | | | |
| Area Weightage @ 6% | | 27.36 | | | | | | |
| Total | | 483.36 | | | | | | |
| 7 KSRB4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240 kgs, with 20 mm and down size graded granite matel coarse aggregates @ 0.69 cum and fine aggragtes @ 0.459cum, machine mixed concrete laid in layers not eceeding 15 cms, thick well compacted, in foundation, plinth and cills including cost of all materials, labour HOM machinery curing complate as per specifications. (Page No. 13.Item No. 4.6) | | | | | | | | |
| For ramps- (Length for shoulder drains deducted) | 1X2 | 2.00 | 100.00 | 0.20 | 0.10 | 4.00 | | |
| | 1X2 | 2.00 | 90.00 | 0.20 | 0.10 | 3.60 | | |
| | 1X2 | 2.00 | 220.00 | 0.20 | 0.10 | 8.80 | | |
| | | | | | | **16.40** | 5747.32 | 94257.00 |
| Basic Rate: | cum | 5422.00 | | | | | | |
| Area Weightage @ 6% | | 325.32 | | | | | | |
| Total | | 5747.32 | | | | | | |
| 8 Providing and fixing 10cms thick pre cast RCC covering slab using reinforced cement concrete M20 mix with stone aggregate 20mm and down size including centring shuttering reinforcement and bar bending machine mixed concrette laid in layers not exceeding 15 cm thick wellcompacted cost of all materials labour curing complete as per specfications ( | | | | | | | | |
| **DETA RATE** | **Sqm** | | | | | | | |
| **Covering Slab** | | | | | | | | |
| | | 2 | 175 | 0.60 | 0.75 | 157.50 | | |
| | | 2 | 190 | 0.60 | 0.75 | 171.00 | | |
| | | 2 | 715 | 0.60 | 0.75 | 643.50 | | |
| | | | | | | **972.00** | 2100.00 | 2041200.00 |
| 9 Providing and fixing MS Grating 260x260 mm(Page No.IX Sl No.237, code No.0771) | | | | | | | | |
| **For shoulder drians** | | | | | | 20.00 | | |
| 9th A cross | | 20 | | | | 15.00 | | |
| 10th A cross | | 15 | | | | 50.00 | | |
| cross roads | | 50 | | | | **85.00** | 84.75 | 7203.75 |



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|---|---|---|---|---|---|---|---|---|
| Area Weightage @ 6% | | 4257.96 | | | | | | |
| Total | | 75223.96 | | | | | | |
| Providing and removing Centering, shuttering, strutting, propping etc., for columns, pillars, piers, abutments, post and struts, square / **rectangular slabs /side walls** polygon in plan including cost of materials, labour complete as per specification and directions of the Engineer in charge.(Page No.16, Item NO.4.32) | | | | | | | | |
| **SIDE WALL** | | | | | | | | |
| 9th A cross | 2x4 | 8 | 105.00 | | 0.60 | 504.00 | | |
| 10th A cross | 2x4 | 8 | 115.00 | | 0.60 | 552.00 | | |
| cross roads | 2x4 | 8 | 310.00 | | 0.60 | 1488.00 | | |
| **CC Road** | | | | | | | | |
| | | 2 | 80 | | 0.30 | 48.00 | | |
| | | 2 | 40 | | 0.30 | 24.00 | | |
| | | | | | | **2616.00** | 483.36 | 1264470.00 |
| Basic Rate: | Sqm | 456.00 | | | | | | |
| Area Weightage @ 6% | | 27.36 | | | | | | |
| Total | | 483.36 | | | | | | |
| 7 KSRB4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240 kgs, with 20 mm and down size graded granite matel coarse aggregates @ 0.69 cum and fine aggragtes @ 0.459cum, machine mixed concrete laid in layers not eceeding 15 cms, thick well compacted, in foundation, plinth and cills including cost of all materials, labour HOM machinery curing complate as per specifications. (Page No. 13.Item No. 4.6) | | | | | | | | |
| For ramps- (Length for shoulder drains deducted) | 1X2 | 2.00 | 100.00 | 0.20 | 0.10 | 4.00 | | |
| | 1X2 | 2.00 | 90.00 | 0.20 | 0.10 | 3.60 | | |
| | 1X2 | 2.00 | 220.00 | 0.20 | 0.10 | 8.80 | | |
| | | | | | | **16.40** | 5747.32 | 94257.00 |
| Basic Rate: | cum | 5422.00 | | | | | | |
| Area Weightage @ 6% | | 325.32 | | | | | | |
| Total | | 5747.32 | | | | | | |
| 8 Providing and fixing 10cms thick pre cast RCC covering slab using reinforced cement concrete M20 mix with stone aggregate 20mm and down size including centring shuttering reinforcement and bar bending machine mixed concrette laid in layers not exceeding 15 cm thick wellcompacted cost of all materials labour curing complete as per specfications ( | | | | | | | | |
| **DETA RATE** | **Sqm** | | | | | | | |
| **Covering Slab** | | | | | | | | |
| | | 2 | 175 | 0.60 | 0.75 | 157.50 | | |
| | | 2 | 190 | 0.60 | 0.75 | 171.00 | | |
| | | 2 | 715 | 0.60 | 0.75 | 643.50 | | |
| | | | | | | **972.00** | 2100.00 | 2041200.00 |
| 9 Providing and fixing MS Grating 260x260 mm(Page No.IX Sl No.237, code No.0771) | | | | | | | | |
| **For shoulder drians** | | | | | | | | |
| 9th A cross | | 20 | | | | 20.00 | | |
| 10th A cross | | 15 | | | | 15.00 | | |
| cross roads | | 50 | | | | 50.00 | | 7203.75 |

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|---|---|---|---|---|---|---|---|---|---|
| | Basic Rate: | Nos | 84.75 | | | | | | |
| 10 | Constructing un reinforced, plain cement concrete for pavements using grade concrete M30 over prepeared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum coarse and fine aggregate at 0.69 cum, fine aggregatea at 0.46cum, coarse anf ine aggregate confirming to IS 383.2016 with superplastizer at 3 lts confirming to IS 9103-2008, mixed in a concrete mixer of not less than 0.6cum capacity and apprriate weight batcher a sper approved mix design, laid in approved fixed side form work (steel channel, mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polyethylene film, wedges steel plates inclduing levelling the form work as per drawing) and spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters ina continous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler, seperation memebrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compund, finishing to lines and grades, textured with texturing machine and curing including cost of all materials, labour, hire charges of machinaries, all lead an dlift charges etc., complete as per specifications, with OPC at 360 Kg/cum and coarse aggregates 0.69cum, fine aggregates 0.46cum. Page No. 176 / Item No. 22.6.1 PWD SR 2018-19 | | | | | | | | |
| | AG Astwathappa Compund area | | 1 | 80.0 | 5.2 | 0.10 | 41.60 | | |
| | | | 1 | 40.0 | 5.4 | 0.10 | 21.40 | | |
| | | | | | | | **63.00** | 5210.96 | 328290.48 |
| | Basic Rate: | cum | 4916.00 | | | | | | |
| | Area Weightage @ 6% | | 294.96 | | | | | | |
| | Total | | 5210.96 | | | | | | |
| 11 | KSRRB M100-1 Loading and unloading of stone boulder/stone aggregates/ sand/ kanker/ moorum. KSRRB M100-1:Placing tipper at loading point loading with front end loading, dumping turning for return trip, excluding time for haulage and return trip complete as per specification MORTH Chapter 1 (Page 136, item No. 17.1) | | | | | | | | |
| | Basic Rate | cum | **57.00** | | | | 1162.80 | 94.34 | 109699.00 |
| | Rs. 2.50 Tonne Km. | | | | | | | | |
| | Average Weight of earth 1.28 Tonne/Km. | | | | | | | | |
| | For 10 Km | | | | | | | | |
| | Rs.2.50X1.28TonneX10K | | **32.00** | | | | | | |
| | Total | | **89.00** | | | | | | |
| | Add Area Weightage6% | | **5.34** | | | | | | |

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|---|---|---|---|---|---|---|---|---|
| | | 94.34 | | | | | | |
| | | | | | Sub Total | | | 8619163.46 |
| | | | | | Add 12% GST charges | | | 1034299.61 |
| | | | | | Add 4% KRIDL charges | | | 344766.54 |
| | | | | | Miscelleneous charges | | | 2271.77 |
| | | | | | Total | | | 10000000.00 |

1)This is certified that the work spot comes under BBMP limits only.
2) The work spot is inspected by me
3) The items Provided in the Estimate are quite Essential
4)The rates are as per CSR of 2016-17 year of PWD Bangalore Circle.

Asst.Engineer
Ward no.7

Asst.Exe.Engineer
Kodigehalli Sub-division
B.B.M.P.

Executive Engineer 30/11
Byatrayanapura Division
B.B.M.P.
30/11

ADMINISTRATIVE APPROVAL
Accorded For Rs. One Crore only
Head of A/c P-1878
Div. Ref. No. 36/18-19 Date 30/11/18
AE 30/11
EE(BTP) 30/11

Technical Sanction
Accorded For Rs100 lacs only
Head of A/C P-1878
CER NO : LW/18-19 Dt 30.11.2018
TA CE (YNK)

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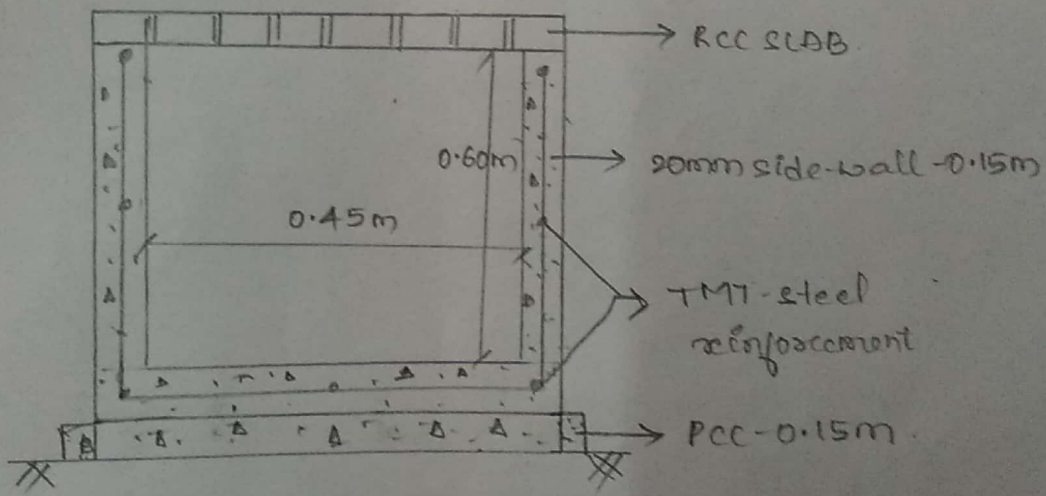
Name of Work: Improvements to roads and drains in Jakkur layout and surrounding areas in Ward no 07 - byatarayanapura




CROSS-SECTION OF RCC-DRAIN

Asst Engg. N.D
AE(WZ)

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